

WHAT IS CLAIMED IS:

5 1. A method of making a substantially transparent catheter shaft,
comprising:

a) passing melted polymeric material through at least one
filtration screen to filter the polymeric material;

b) extruding the filtered molten polymeric material through a
die of an extruder to form extruded tubing;

10 c) maintaining a temperature at an exit of the extruder no
greater than from about 5% to about 15% above a melting point of
the polymeric material; and

d) introducing the extruded tubing into a quench bath
containing a quench medium, and contacting the extruded tubing with
the quench medium, and so that the polymeric material forming the
extruded tubing is in an amorphous state.

15 2. The method of Claim 1 wherein step a comprises passing the
melted polymeric material through at least two filtration screens having a
mesh size of from about 10 μ m to about 30 μ m.

20 3. The method of Claim 1 including maintaining the extruded
tubing between the extruder exit and the quench bath for about 0.01 sec to
about 0.10 sec after exiting the extruder and before contacting the quench
medium.

4. The method of Claim 1 wherein the polymeric material is a poly-
etheretherketone polymeric material, and including melt processing the poly-

etheretherketone polymeric material at a temperature of from about 720° F to about 730° F.

5. The method of Claim 1 including minimizing the formation of water marks on the tubing by providing a quench medium which does not
5 boil upon introduction of the tubing therein.

6. The method of Claim 1 including providing a quench medium comprising propylene glycol.

7. The method of Claim 1 including providing an aqueous quench medium, and chilling the aqueous quench medium to about 4° C.

10 8. An intraluminal catheter, comprising a catheter shaft having a proximal end, a distal end, a lumen therein, and having at least a section of the shaft being substantially transparent and formed from a polyetheretherketone polymeric material.

15 9. The intraluminal catheter of Claim 8 wherein the transparent shaft section has a wall thickness of about 0.05 mm to about 0.13 mm.

10. The intraluminal catheter of Claim 8 wherein the polyetheretherketone polymeric material of the transparent shaft section is amorphous.

20 11. The intraluminal catheter of Claim 8 wherein the transparent shaft section has a percent transmittance of visible light of from about 50% to about 100%.

12. The intraluminal catheter of Claim 8 wherein the transparent shaft section has a crystallinity of not greater than about 20%.

13. An intraluminal balloon catheter, comprising;

5 a) an elongated catheter shaft having a proximal end, a distal end, an inflation lumen, and having a substantially transparent shaft section formed of amorphous polymeric material;

b) an inflatable member on a distal section of the shaft, having a proximal end, a distal end, and an interior in fluid communication with the inflation lumen.

10 14. The intraluminal catheter of Claim 13, wherein the substantially transparent shaft section is formed of a polymeric material selected from the group consisting of polyphenylene sulfide, polyether sulfone, and polyether-etherketone.

15 15. The intraluminal catheter of Claim 13, wherein the elongated shaft includes:

a) an outer tubular member having a proximal section and a distal section, the proximal section having at least a portion thereof being substantially transparent and formed of a polyetheretherketone polymeric material; and

20 b) an inner tubular member having a proximal section, a distal section, and a lumen, and being disposed within the outer tubular member and defining therewith the inflation lumen, so that a portion of the inner tubular member disposed within the outer tubular member transparent portion is visible through the outer tubular member.

16. The intraluminal catheter of Claim 15 wherein the outer tubular member has a wall thickness of about 0.05 mm to about 0.13 mm.

17. The intraluminal catheter of Claim 15 wherein the outer tubular member has an outer diameter of about 0.7 mm to about 1.3 mm.

5 18. The intraluminal catheter of Claim 15 wherein the outer tubular member has an inner diameter of about 0.4 mm to about 1.2 mm.

10 19. The intraluminal catheter of Claim 15 wherein the outer tubular member comprises a substantially transparent proximal shaft section formed of amorphous polyetheretherketone and a distal shaft section formed of a different polymeric material.

20. The intraluminal catheter of Claim 19 wherein the amorphous transparent shaft section has a crystallinity of not greater than about 20%.

15 21. The intraluminal catheter of Claim 19 wherein the amorphous transparent shaft section has a percent transmittance of visible light of from about 50% to about 100%.

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